

CDC Division of Global Migration and Quarantine- Miami Quarantine Station
Miami-Dade County Health Department - Tuberculosis (TB) Control and Prevention Program.
Miami, Florida

The CSTE fellowship will be based in Miami, Florida, at the CDC-Miami Quarantine Station and the Miami-Dade County Health Department-TB Control and Prevention Program. The fellow will have an opportunity to live in an esthetically beautiful, multicultural, and dynamic city, and experience, as well as explore, an interesting range of conventional and unique public health issues. A few examples of daily field activities will include inspecting animal and human products posing threat to human health; responding to reports of illnesses on cruises and airplanes, including threats of bioterrorism; collecting, distributing and managing medical information of immigrants, and refugees; conducting source, contact and outbreak investigations due to tuberculosis; and ensuring directly observed therapy (DOT) for active and suspected cases of TB. The opportunities to investigate important questions related to these activities are immense and implementation of studies related to prevention and control of infectious diseases at our borders is greatly needed.

Miami is one of the United States' major ports of entry, with busy maritime (cruise and cargo) and airline traffic. The Miami Quarantine Station (MQS) is physically located at the Miami International Airport, which yearly serves approximately 31,668,000 passengers, of which about 15,249,322 arrive on international flights (source: MIA traffic Report, 2001). In addition to Miami, the MQS is responsible for the prevention and control of communicable diseases at all ports of entry in Florida, Puerto Rico and US Virgin Island. The MQS is one of eight field quarantine stations operated by the CDC-Division of Global Migration and Quarantine (DGMQ), National Center for Infectious Diseases. The mission of DGMQ is "to make and enforce regulations necessary to prevent the introduction, transmission, or spread of communicable diseases from foreign countries into the United States." In order to enforce the legal and regulatory authority of DGMQ in support of its mission, the MQS works closely with other federal authorities (e.g. Customs and Border Protection, US Department of Agriculture, US Fish and Wildlife, United States Coast Guard, Federal Bureau of Investigations, etc.) and local partners (County Health Departments, County Aviation, police, fire rescue, etc.) in tasks such as monitoring the health status of immigrants, refugees and travelers; performing inspections of maritime vessels and cargo for infectious diseases; distributing immunobiologics and investigational drugs when indicated; providing travelers with essential health information; and ensuring appropriate disposition as well as public health action for illnesses on planes and vessels.

The Miami-Dade County Health Department (MDCHD) is one of sixty-seven county health departments under the Florida Department of Health. The mission of the Miami-Dade County Health Department Tuberculosis Control and Prevention Program (MDCHD TB Program) is to identify, treat and prevent the spread of tuberculosis in Miami-Dade County and control its public health threat. The MDCHD TB program consists of four services: clinical, field, surveillance and administrative. The clinical services consist of three clinics which provide diagnosis and treatment of active and latent TB infection. The field service performs outreach activities aimed at identifying and screening persons exposed to TB and administer directly

observed therapy (DOT). The surveillance service performs functions related to reporting, surveillance and analysis of TB. In addition to maintaining updated databases of all suspected, confirmed and latent TB cases, it maintains a database of all immigrants and refugees with active or inactive TB.

As in the rest of the nation, the incidence of TB cases in Miami-Dade County is on the rise in its foreign born population. Through the collaboration between the Miami Quarantine Station and the MDCHD TB program, the CSTE fellow will have an opportunity to explore this increase, and identify specific populations in need of stronger prevention measures. To achieve this, the entire process leading to the diagnosis of TB in an immigrant, refugee or parolee can be reviewed and analyzed: starting from the overseas assessment, and the identification of contagious or non-contagious conditions at the port of entry, to the time of follow-up and treatment at the local county health department TB clinic.

In addition to this study, there would be several other projects, depending on the interests of the fellow, both related to the prevention and control of TB as well as other infectious diseases entering our borders. Some examples of potential projects include:

1. Analyzing TB genotyping results of culture positive cases to identify patterns of transmission in the community
2. Analyzing current database at the MDCHD TB program to determine the etiology of an observed increase in TB cases in the pediatric population, specifically among the foreign borne, during 2004
3. Assessing the adequacy and timeliness of overseas medical assessments for communicable diseases in immigrants and refugees
4. Exploring and implementing active and passive surveillance methods of passengers, crew and cargo on international and domestic conveyances for indications of communicable diseases
5. Designing and implementing a program for preventing the introduction and spread of communicable disease, by analyzing disease trends, and existing prevention practices
6. Assessing the cost effectiveness of screening for communicable diseases that are transmissible person-to-person, in food handlers working on cruise lines
7. Assessing cost effectiveness of screening and/or immunizing cruise line crew against certain vaccine preventable diseases (e.g. hepatitis A, varicella, etc.)
8. Describing public health management (e.g diagnosis, isolation, treatment, quarantine of contacts) of cruise line crew who are ill with communicable disease of public health significance (e.g. varicella, Salmonella typhi, hepatitis A, TB, etc)
9. Describing the incidence of contagious and non-contagious conditions, and other reportable communicable diseases in maritime population arriving in Miami

10. Developing and refining protocols and procedures for public health responses at ports of entry, by participating and planning upcoming field and table top exercises

11. Developing and presenting training to various federal, state and local partners on public health emergency response protocols, communicable diseases and quarantine activities.

The joint mentorship to be provided by the CDC-Miami Quarantine Station and Miami Dade County Health Department- Tuberculosis (TB) Control and Prevention Program, is envisioned to expose the CSTE fellow to a wide range of public health issues. He/she would experience the renaissance of the quarantine stations prompted by the global outbreaks of SARS, and the future threat of pandemic influenza and other emerging infectious diseases. In addition, he/she would gain insight about traditional public health issues through field experience in TB and rotations in other programs (e.g. Refugee Health, HIV, STD) at the MDCHD, if desired. Our program is committed to giving the fellow an experience that would address each of the required competencies including participating in outbreak investigations, evaluating a surveillance system and presenting findings in an oral or written format to appropriate audiences.

Assignment Location: Miami, Florida

Primary mentor: Kiren Mitruka, MD
Medical Officer
CDC-Division of Global Migration and Quarantine
Miami Quarantine Station

Secondary mentor: Anthony Solages, MD, MSc
Clinical director
Miami-Dade County Health Department- Tuberculosis (TB) Control and Prevention Program